South Mountain Transportation Corridor Study

Citizens Advisory Team
Draft Technical Report Summary

Economic Impacts

Why study economic impacts in the Environmental Impact Statement (EIS)?

Construction and operation of a freeway like the proposed South Mountain Freeway could alter economic characteristics in the Study Area. Such a project could affect where people live and work, travel patterns, delivery of public services and public sector revenues.

What kind of impacts would occur from construction?

- Residences, businesses and public facilities could be acquired and relocated.
- Changes in accessibility along the new facility could affect properties adjacent to the highway by altering travel patterns.
- Employment levels in the local area could be affected.
- Acquisition of potentially developable land could reduce local government revenues.
- Such a project could reduce auto and truck travel times throughout the region and enhance the movement of goods and delivery of services.

How do the action alternatives differ in construction-related impacts?

All action alternatives would cause acquisition and relocation of residences and businesses, but the number of these impacts would vary. The numbers of potentially affected businesses and associated employees, by alternative, as a result of land acquisition for the South Mountain Freeway are shown in the following table.

Potential Displacements

Alternative/Option	Number of Businesses	Number of Employees
Western Section		
W55	119	1,500+
W71	10	630+
W101, Western Option	3	70+
W101, Central Option	6	900+
W101, Eastern Option	5	900+
Eastern Section		
E1	0 [a]	0

[a] Churches were included in the community facility category not businesses.

These topics and materials were originally developed for the July 24, 2008 meeting and were presented at the August 12, 2008 meeting.

Economic Impacts

The Western Section of the Study Area is becoming more urban as one moves eastward. The W55 Alternative is the easternmost alternative; it would cause the most business displacements and would also affect the greatest number of employees.

What kinds of freeway operational impacts (postconstruction) would occur?

Overall, the freeway would allow for faster and smoother transportation flow in the Phoenix metropolitan area by improving the regional freeway system operation. To determine the resulting benefits, the time savings of people who would use the regional freeway system after construction of the South Mountain Freeway were evaluated. An economic loss when a person is delayed due to traffic congestion is often considered a time tax.

Real costs are associated with travel time: productivity, worker availability, freight inventory, logistics, just-in-time production and market access. To estimate the total value of decreased time spent in congestion after implementation of an action alternative, the value per person-hour spent in congestion was estimated. Factors considered included:

- average household income levels
- amount of local, inter city and truck travel
- distribution of personal and business travel

For analytical purposes, the proposed South Mountain Freeway was assumed to be fully operational in 2016. Highway engineers use a target year (the design year) for which projected traffic volumes can be accommodated with their designs. For the South Mountain Freeway, that year is 2030. Since the E1 Alternative is the only action alternative in the Eastern Section, it is logical to assume that it will be common to each action alternative in the Western Section. Therefore, it is included within this discussion from logical terminus to logical terminus. The project team's analysis showed that the traveling public's time saved for the W55 Alternative would be approximately $5.9 billion from 2016 to 2030. The value of travel time savings for the W71 Alternative and the W101 Alternative and Options would be about $6.0 billion and $6.3 billion, respectively, from 2016 to 2030. These benefits compare favorably with the estimated total construction cost of $1.7 billion. The travel time savings benefit is valued at over $400 million per year if the South Mountain Freeway were to be constructed.

How do the action alternatives differ in operational impacts?

All alternatives, when operating, would have similar kinds and levels of impacts on economic resources. Differences in travel time impacts would be primarily between the No-Action Alternative and the action alternatives because all would be designed to accomplish the same objective in the region—reduced congestion and travel times. There is, however, a slight difference in travel time savings among the action alternatives and options. In 2030, travel time savings for the W55 Alternative are expected to exceed 107 million hours annually, time savings for W71 Alternative are estimated to exceed 106 million hours annually, and the average time savings for the W101 Alternative and Options are expected to exceed 112 million hours annually.

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Economic Impacts

What if the project were not constructed?

No project-specific impacts would be experienced. However, urban growth is projected to continue in the Western Section of the Study Area. As indicated above, if the South Mountain Freeway were constructed, the savings from reduced travel times is estimated to be over $400 million per year. If the freeway were not constructed, the savings would be foregone (i.e., a cost to the public) and the travel time benefit forfeited. Increased traffic congestion on surface streets and nearby freeways would adversely affect the traveling public and trucking and other transportation-related activities in the Study Area.

Are there any specific and/or unique impacts from implementation of any of the action alternatives?

The W71 and W101 alternatives could affect manufacturing businesses which would need to be relocated without interruption of operations. There are no known unique businesses affected by the W55 Alternative.

What could the Arizona Department of Transportation (ADOT) do to reduce or avoid impacts?

Through adjustments to freeway design, ADOT could reduce residential and business displacements. Current alignment designs represent some adjustments that have already been incorporated to reduce or avoid impacts.

Reductions in local tax revenues resulting from land purchased by a public agency, such as ADOT, are generally not mitigated. However, the combination of business benefits and travel time and other benefits to the traveling public are anticipated to offset these impacts.

What could ADOT do to reduce construction impacts?

ADOT would look at a number of ways to avoid or reduce construction-related impacts. Examples of some of the measures that ADOT could undertake are:

- maintain access to businesses, neighborhoods and public facilities during construction
- schedule timing of construction activities to minimize economic impacts

What could ADOT do to reduce economic impacts once the freeway were operational?

Once operational, any residential and business displacement impacts and tax base impacts would have already occurred.

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Economic Impacts

Are the conclusions presented in this summary final?

Quantitative findings relative to impacts could change. Potential changes would be based on outcomes related to the following issues and will be presented to the public as part of publication of the Draft EIS, Final EIS and, if an action alternative were selected, in the final design process. The issues include:

- refinement in design features through the design process
- updated aerial photography as it relates to rapid growth in the Western Section of the Study Area
- ongoing communications with the City of Phoenix regarding measures to minimize harm to Phoenix South Mountain Park/Preserve
- ongoing communications with the Gila River Indian Community (GRIC) regarding granting permission to study action alternatives on GRIC land
- ongoing consideration of public comments
- potential updates to traffic forecasts as regularly revised by the Maricopa Association of Governments
- potential changes regarding updated census data
- regularly updated cost estimates for construction, right-of-way acquisition, relocation and mitigation

Even with these factors possibly affecting findings, the study team anticipates effects would be equal among the alternatives and, consequently, impacts would be roughly comparable. This assumption would be confirmed if, and when, such changes were to occur.

As a member of the Citizens Advisory Team, how can you review the entire technical report?

The complete technical report is available for review by making an appointment with Mike Bruder at 602-712-6836 or Mark Hollowell at 602-712-6819.

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Economic Impacts

Table 1. Reductions in local annual property tax revenues resulting from right-of-way acquisition, existing land use

Action Alternative/ Option	Agriculture	Commercial	Industrial	Single-family	Multifamily	Vacant	Totals
Phoenix							
Western Section							
W55	$9,238	$1,591	$372,261	$34,857	$—	$17,028	$434,975
W71	10,836	—	327,589	128,776	—	28,817	496,018
W101 and Options[a]	14,126 to 15,929	—	59,562 to 67,007	50,348 to 76,491	—	20,812 to 32,019	153,916 to 180,419
Eastern Section							
E1	$3,141	$—	$24,817	$105,538	$3,421	$62,728	$199,646
Tolleson							
Western Section							
W55	$—	$—	$—	$—	$—	$—	$—
W71	—	—	—	—	—	—	—
W101 and Options	1,673 to 2,240	—	124,807 to 205,984	—	—	1,892 to 8,441	134,629 to 208,097
Eastern Section							
E1	$—	$—	$—	$—	$—	$—	$—
Avondale							
Western Section							
W55	$—	$—	$—	$—	$—	$—	$—
W71	—	—	—	—	—	—	—
W101 and Options	1[b]	5,113	—	—	—	—	5,114
Eastern Section							
E1	$—	$—	$—	$—	$—	$—	$—

Notes:
[a] W101 Alternative and Options include ranges because of design options.
[b] These amounts for Avondale are negligible because the areas of impact are less than 1 acre.

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Table 2. Reductions in annual retail sales tax revenues resulting from right-of-way acquisition, existing conditions

Action Alternative/ Option	Agriculture	Commercial	Industrial	Single-family	Multifamily	Vacant	Totals
Phoenix							
Western Section							
W55	$—	$31,559	$1,276,090	$—	$—	$—	$1,307,649
W71	—	—	1,122,959	—	—	—	1,122,959
W101 and Options[a]	—	—	204,174 to 229,698	—	—	—	204,174 to 229,698
Eastern Section							
E1	$—	$—	$ 85,073	$—	$—	$—	$85,073
Tolleson							
Western Section							
W55	$—	$—	$—	$—	$—	$—	$—
W71	—	—	—	—	—	—	—
W101 and Options	—	—	590,783 to 980,699	—	—	—	590,783 to 980,699
Eastern Section							
E1	$—	$—	$—	$—	$—	$—	$—
Avondale							
Western Section							
W55	$—	$—	$—	$—	$—	$—	$—
W71	—	—	—	—	—	—	—
W101 and Options	—	112,712	—	—	—	—	112,712
Eastern Section							
E1	$—	$—	$—	$—	$—	$—	$—

Notes:
[a] W101 Alternative and Options include ranges because of design options.

Table 3. Reductions in local annual property tax revenues resulting from right-of-way acquisition, future land use

Action Alternative/ Option	Agriculture	Commercial	Industrial	Single-family	Multifamily	Vacant	Totals
Phoenix							
Western Section							
W55	$—	$488,600	$590,654	$268,202	$86,671	$—	$1,434,127
W71	—	343,156	583,208	790,084	12,545	—	1,728,993
W101 and Options[a]	—	368,154 to 522,688	196,057 to 265,546	812,353 to 921,764	0 to 4,562	—	1,482,775 to 1,609,022
Eastern Section							
E1	$—	$229,528	$37,226	$336,948	$9,123	$—	$612,825
Tolleson							
Western Section							
W55	$—	$—	$—	$—	$—	$—	$—
W71	—	—	—	—	—	—	—
W101 and Options	—	362,723 to 375,813	256,835 to 377,373	49,283, 49,419	—	—	646,931 to 802,469
Eastern Section							
E1	$—	$—	$—	$—	$—	$—	$—
Avondale							
Western Section							
W55	$—	$—	$—	$—	$—	$—	$—
W71	—	—	—	—	—	—	—
W101 and Options	—	65,381 to 90,425	—	—	4,892	—	70,274 to 95,317
Eastern Section							
E1	$—	$—	$—	$—	$—	$—	$—

Notes:
[a] W101 Alternative and Options include ranges because of design options.

Table 4. Reductions in annual retail sales tax revenues resulting from right-of-way acquisition, future land use

Action Alternative/ Option	Agriculture	Commercial	Industrial	Single-family	Multifamily	Vacant	Totals
Phoenix							
Western Section							
W55	$—	$9,693,189	$2,024,730	$—	$—	$—	$11,717,919
W71	—	6,807,775	1,999,208	—	—	—	8,806,983
W101 and Options[a]	—	7,303,705 to 10,369,458	714,611 to 910,278	—	—	—	8,026,823 to 11,279,736
Eastern Section							
E1	$—	$4,553,545	$127,609	$—	$—	$—	$4,681,154
Tolleson							
Western Section							
W55	$—	$—	$—	$—	$—	$—	$—
W71	—	—	—	—	—	—	—
W101 and Options	—	7,985,485 to 8,284,546	896,004 to 1,437,350	—	—	—	8,881,489 to 9,721,395
Eastern Section							
E1	$—	$—	$—	$—	$—	$—	$—
Avondale							
Western Section							
W55	—	—	—	—	—	—	—
W71	—	—	—	—	—	—	—
W101 and Options	—	1,801,505 to 2,491,550	—	—	—	—	1,801,505 to 2,491,550
Eastern Section							
E1	$—	$—	$—	$—	$—	$—	$—

Notes:
[a] W101 Alternative and Options include ranges because of design options.

Table 5. Estimates of Phoenix's total tax revenue impacts

Property and sales tax combined, dollars/year			
Combined property and city sales tax revenues, 2005–06 estimate			**$478,191,000**
City General Fund revenue, 2005–06 estimate			**$922,162,000**
Action Alternative/Option	**Current land use conditions ($)**	**Percentage of current property and sales tax revenues**	**Percentage of current General Fund revenue**
Western Section			
W55	1,743,000	0.36	0.19
W71	1,619,000	0.34	0.18
W101 and Options[a]	366,600 to 410,100	0.08 to 0.09	0.04
Eastern Section			
E1	284,700	0.06	0.03

Notes:
[a] W101 Alternative and Options include ranges because of design options.

Table 6. Estimates of Tolleson's total tax revenue impacts

Property and sales tax combined, dollars/year			
Combined property and city sales tax revenues, 2005-06 estimate			**$5,963,350**
City General Fund revenue, 2005-06 estimate			**$8,171,610**
Action Alternative/Option	**Current land use conditions ($)**	**Percentage of current property and sales tax revenues**	**Percentage of current General Fund revenue**
Western Section			
W101 and Options[a]	682,100 to 802,500	11 to 13	9 to 10

Notes:
[a] W101 Alternative and Options include ranges because of design options.

Table 7. Estimates of Avondale's total tax revenue impacts

Property and sales tax combined, dollars/year			
Combined property and city sales tax revenues, 2005-06 estimate			**$35,956,996**
City General Fund revenue, 2005-06 estimate			**$39,485,300**
Action Alternative/Option	**Current land use conditions ($)**	**Percentage of current property and sales tax revenues**	**Percentage of current General Fund revenue**
Western Section			
W101 and Options[a]	0 to 118,000	0 to 0.33	0 to 0.30

Notes:
[a] W101 Alternative and Options include ranges because of design options.

Table 8. Estimate of the value of motorists' time in dollars per hour

	Percent of person-hr in traffic[1]	Travel distribution percent[2]		Total hours		Percent values of travel time[3]		Local earn./hr rates[4,5,6]		Value of travel time		Weighted average local travel time
		Personal	Business	Personal	Business	Personal	Business	Personal	Business	Personal	Business	
Local travel	0.35	94.4	5.6	0.33	0.02	50	100	$24.21	$21.07	$12.11	$21.07	$12.61
Intercity travel	0.55	86.9	13.1	0.48	0.07	70	100	$24.21	$21.07	$16.95	$21.07	$17.49
Truck travel	0.10	100		0.10		100		$22.19		$22.19		$22.19
Total weighted average time value (per person-hour)												**$16.25**

(1) Percent of person-hr. in traffic for travel on the SMTC is assumed to be 35 percent local travel; 55 percent inter-city travel; and 10 percent trucks.
(2) Travel distribution percent: From the U.S. DOT; Derived from on-line analysis of PMT data from the 1995 Nationwide Personal Transportation Survey
(3) Percent of person-hr in traffic for trucks on the roadway is from the MAG 2001 traffic counts on freeways in Study Area.
(4) Personal local and intercity earnings/hour rates: The 2005 median household income for Maricopa County calculated by using the CPI Inflation Calculator available through the Bureau of Labor Statistics. There was a 1.11 inflation rate from 2000 to March 11, 2005. Assumed 2080 work hours per year.
(5) Business local and intercity earnings/hour rates: Earnings per hour rates were retrieved from the U.S. Bureau of Labor Statistics employer cost for employee compensation for U.S. Mountain Region workers in private industry. The most recent per hour data was collected (3rd Quarter 2004).
(6) Truck drivers: Earnings per hour rates were retrieved from the U.S. Bureau of Labor Statistics employer cost for employee compensation for the U.S Transportation and Material Moving sector. The most recent per hour data was collected (3rd Quarter 2004).

Table 9. Economic benefit of reduced regional traffic congestion due to action alternatives

	Year reductions in delay compared with No-Action, hours per year			Economic benefit associated with reduction in traffic congestion ($million/year)			Economic benefit discounted at 3 percent ($million/year)		
	W55	W71	W101	W55	W71	W101	W55	W71	W101
2016	36,004,500	36,231,100	38,255,700	585	589	622	423	425	449
2017	36,724,600	36,955,700	39,020,800	597	601	634	419	421	445
2018	37,459,100	37,694,800	39,801,200	609	613	647	415	417	440
2019	38,208,300	38,448,700	40,597,200	621	625	660	410	413	436
2020	38,972,500	39,217,700	41,409,100	633	637	673	406	409	432
2021	39,752,000	40,002,100	42,237,300	646	650	686	403	405	428
2022	40,547,000	40,802,100	43,082,000	659	663	700	399	401	424
2023	41,357,900	41,618,100	43,943,600	672	676	714	395	397	419
2024	42,185,100	42,450,500	44,822,500	686	690	728	391	393	415
2025	43,028,800	43,299,500	45,718,900	699	704	743	387	390	411
2026	43,889,400	44,165,500	46,633,300	713	718	758	383	386	407
2027	44,767,200	45,048,800	47,566,000	727	732	773	380	382	403
2028	45,662,500	45,949,800	48,517,300	742	747	788	376	378	399
2029	46,575,800	46,868,800	49,487,600	757	762	804	372	375	396
2030	47,507,310	47,806,200	50,477,310	772	777	820	369	371	392
							5,927	**5,964**	**6,297**

Assumptions: value of motorists' time caught in congestion = $16.25/hour;
number of days per year with congestion = 270

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Utilities

Why document analysis of utilities in the Environmental Impact Statement (EIS)?

The Phoenix metropolitan area is growing rapidly and has been since the 1950s. Today's American society expectations are such that public/quasi-public services need to be in place to support this growth. So, as growth creates the need for more transportation infrastructure, it also creates the need for utility infrastructure. At times, the two can conflict.

Without proper planning and coordination, the construction of a major transportation facility like the proposed South Mountain Freeway could require relocation and/or reconstruction of major utility lines providing electricity, phone, sewer, natural gas, water and fiber optics to perhaps millions of people. Relocation and/or reconstruction of major utility lines and corridors can be extremely costly and delay meeting important project milestones. Additionally, a project of this size would likely affect smaller utility lines, irrigation canals and wells.

Utility lines and corridors are abundant in the Study Area. For the proposed project, the study team focused on major utilities and utility corridors that may influence the alignment of the proposed freeway.

What kind of impacts could occur from construction?

In the Western Section of the Study Area, any one of the action alternatives could affect the following major utilities:

- The Roosevelt Irrigation District (RID) Canal (the proposed freeway would have to cross it)
- Two Union Pacific Railroad tracks (the freeway would have to cross them)
- Two major overhead power lines—a Western Area Power Administration (WAPA) 230 kilovolt (kV) line that parallels Elwood Street and a Salt River Project (SRP) 230 kV line adjacent to Broadway Road
- A Kinder Morgan Energy Partners 20-inch high-pressure petroleum pipeline that parallels the Union Pacific Railroad tracks
- A Southwest Gas 10-inch gas pipeline adjacent to Buckeye Road
- Two underground fiber optic lines—a Sprint line parallel to Lower Buckeye Road and an AT&T line adjacent to the RID canal

Individual alternatives would have specific utility impacts:

The ***W55 Alternative*** would potentially affect additional major utilities, including:

- Two 90-inch City of Phoenix sanitary sewer lines along Broadway Road between 59th and 63rd avenues
- Several City of Phoenix 12-inch waterlines along major crossroads
- SRP irrigation laterals
- Multiple power lines
- The Salt Canal along Van Buren Street

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Utilities

- Multiple Union Pacific Railroad spur tracks near 55th Avenue
- A power substation at 59th Avenue and Lower Buckeye Road—avoidance may be possible in design

The ***W71 Alternative*** could affect additional major utilities, including:

- Two 90-inch City of Phoenix sanitary sewer lines along Broadway Road between 71st and 75th avenues
- Several City of Phoenix 12-inch waterlines along major crossroads
- SRP irrigation laterals
- Multiple power lines
- The Salt Canal along Van Buren Street

The *W101 Alternative and Options* could affect additional major utilities, including:

W101 Western Option

- A City of Phoenix 66-inch sanitary sewer line
- A Cox overhead fiber optic cable at Van Buren Street and at 99th Avenue
- A City of Tolleson 12-inch water line along Roosevelt Street
- A Qwest underground telephone cable at Van Buren Street
- A RID well
- An SRP well
- SRP irrigation laterals
- Multiple power lines
- Three City of Tolleson 48-inch sewer lines
- Seven City of Phoenix sanitary sewer lines, 60 inches or greater
- Fourteen City of Phoenix wells
- A Kinder Morgan Energy Partners 12-inch petroleum pipeline parallel to Buckeye Road
- Two Cox Cable underground fiber vaults at Lower Buckeye Road and 99th Avenue

W101 Central Option

- A City of Phoenix 66-inch sanitary sewer line
- A Cox overhead fiber optic cable at Van Buren Street and 99th Avenue
- City of Tolleson 12-inch water lines
- A Qwest underground telephone cable at Van Buren Street
- A RID well
- An SRP well
- SRP irrigation laterals

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Utilities

- Multiple power lines
- Four City of Tolleson 48-inch sewer lines
- Eight City of Phoenix sanitary sewer lines 60-inch or greater
- Eight City of Phoenix wells
- A pump station and sewer lift station near Buckeye Road and 95th Avenue
- A Kinder Morgan Energy Partners 12-inch petroleum pipeline parallel to Buckeye Road

W101 Eastern Option

- A City of Phoenix 66-inch sanitary sewer line
- A Cox overhead fiber optic cable at Van Buren Street and 99th Avenue
- City of Tolleson 12-inch water lines
- A RID well
- An SRP well
- SRP irrigation laterals
- Multiple power lines
- Four City of Tolleson 48-inch sewer lines
- Five City of Phoenix sanitary sewer lines, 60 inches or greater
- A City of Phoenix well
- A pump station and sewer lift station near Buckeye Road and 91st Avenue
- A Kinder Morgan Energy Partners 12-inch petroleum pipeline parallel to Buckeye Road

The options vary in the length of utility disruption that could occur as a result of construction.

In the Eastern Section, the ***E1 Alternative*** could affect utilities, including:

- An El Paso Gas natural gas line along 47th Avenue
- Two major overhead power lines—a WAPA 230 kV line at 47th Street and a SRP 500 kV line adjacent to Pecos Road
- A City of Phoenix 48-inch water line along Pecos Road
- A City of Phoenix 48-inch sanitary sewer line along Pecos Road
- Qwest telephone cables
- A Kinder Morgan Energy Partners petroleum pipeline

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Utilities

How would the action alternatives differ in construction-related impacts?

In general, comparison of impacts among alternatives in the Western Section is fairly equal, with the exception of major site facilities, such as railroad spur lines, power substations and pump/lift stations. As noted earlier, some action alternatives may affect longer lengths of utility corridors than others, but the differences in lengths of potential disturbance would be indistinguishable among the action alternatives.

What kinds of freeway operational impacts (postconstruction) would occur?

The study team anticipates no operational impacts on utilities from the South Mountain Freeway.

Would the action alternatives cause any specific and/or unique impacts?

The study team anticipates no unique impacts on utilities from construction and operation of the proposed South Mountain Freeway.

What if the project were not constructed?

No project-specific impacts would be experienced.

What could ADOT do to reduce impacts on utilities once the freeway were operational?

ADOT would look at a number of ways to avoid or reduce operational impacts. Basic mitigation to minimize utility impacts is standard practice in final freeway design. During the final design process, ongoing coordination with utility purveyors would seek to identify such measures as utility encasements and bridge structures to minimize impacts. ADOT would also consider design refinements, such as minor adjustments in alignment or reduction in right-of-way needs, to minimize utility impacts.

Are the conclusions presented in this summary final?

Quantitative findings relative to impacts could change. Potential changes would be based on the following and would be presented to the public during the Draft EIS, Final EIS and, if an action alternative were selected, in the final design process:

- Refinement in design features through the design process
- Updated aerial photography as it relates to rapid growth in the Western Section of the Study Area
- Ongoing communications with the City of Phoenix regarding measures to minimize harm to Phoenix South Mountain Park/Preserve
- Ongoing communications with the Gila River Indian Community (GRIC) regarding granting permission to study action alternatives on GRIC land
- Ongoing consideration of public comments

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Utilities

- Potential updates to traffic forecasts as regularly revised by the Maricopa Association of Governments
- Potential changes regarding updated census data
- Regularly updated cost estimates for construction, right-of-way acquisition, relocation and mitigation

Even with these factors possibly affecting findings, the study team anticipates effects would be equal among the alternatives and, consequently, impacts would be roughly comparable. This assumption would be confirmed if, and when, such changes were to occur.

As a member of the Citizens Advisory Team, how can you review the entire technical report?

The complete technical report is available for review by making an appointment with Mike Bruder at 602-712-6836 or Mark Hollowell at 602-712-6819.

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Prime and Unique Farmland

Why study prime and unique farmland in the Environmental Impact Statement (EIS)?

The Phoenix metropolitan area is founded in agriculture and is rich in its agricultural history. As the area has developed, agricultural land has been converted to nonagricultural uses at a rapid pace. The phenomenon is not unique to just the Phoenix metropolitan area. In fact, at the national level, Congress recognized that the nation's farmlands are a unique natural resource providing food and fiber necessary for the continued welfare of the people of the United States. Each year, however, extensive farmland acreage is irrevocably converted from actual or potential agricultural use to nonagricultural uses. In response, Congress enacted the Farmland Protection Policy Act (FPPA) (7 Code of Federal Regulations [C.F.R.] Part 658). The act's purpose is to "minimize the extent to which Federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses, and to assure that Federal programs are administered in a manner that, to the extent practicable, will be compatible with State, unit of local government, and private programs and policies to protect farmland."

A substantial portion of the Western Section of the Study Area is in agricultural use; rapid, planned development is contributing to the conversion of this land to residential, business and industrial uses. The purpose of studying potential impacts on farmland is to determine whether such impacts would unnecessarily contribute to such a conversion and whether such a project would be consistent with state and local plans.

What kind of impacts could occur from construction?

The types of environmental impacts that could occur as a result of implementing this proposed project include:

- direct–actions or projects that result in making land nonfarmable (building or construction on a specific area that would cause a direct impact)
- indirect–may include isolation of remnant parcels (agricultural land that would be divided by a project, such as a freeway, resulting in one or both parcels being isolated and nonfarmable) or removing land adjacent to a specific impact area from agricultural production

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Prime and Unique Farmland

How do the alternatives differ in construction-related impacts?

All action alternatives would convert some agricultural land to a nonagricultural transportation-related use as shown in the table below.

Farmland Conversion

Alternative/Option	Total Acres
Western Section Alternatives	
W55	527
W71	810
W101, Western Option	969
W101, Central Option	952
W101, Eastern Option	947
Eastern Section Alternative	
E1	156

The majority of agricultural land is located in the Western Section of the Study Area. As shown in the table, the amount of farmland that would be converted to a transportation use increases with alternatives as they move from the east to the west; consequently, the W101 Alternative and options would have the greatest impact on farmland. Additional factors should be considered. 1) The W55 Alternative is the easternmost of the alternatives and, as currently planned, would closely follow the freeway alignment as it has been planned for more than 20 years. Unlike the W71 and W101 alternatives, much of the land in or adjacent to what has been planned as the W55 Alternative right-of-way is anticipated to become commercial and industrial. 2) Urbanization is progressing rapidly westward. By the time freeway construction were to begin, it is likely that farmland acreage converted to a transportation use for the westernmost alternatives would be less than currently being reported, because such land would likely have already been converted from agricultural to residential, commercial and/or industrial uses. 3) When considered as farmland conversion per freeway mile, the impact would be relatively the same, with the exception of the W55 Alternative for reasons described above.

The Eastern Section of the Study Area contains prime and unique farmland acreage near 51st Avenue and Carver Road. No farmland is located along the Pecos Road section.

What kind of freeway operational impacts (postconstruction) could occur?

Depending on plot size and crop type, farmland parcels not directly affected by the proposed freeway could become too small to economically support agricultural production and would, therefore, be eliminated from further commitment to agricultural use.

How do the alternatives differ in operational-related impacts?

When operational, none of the action alternatives would appreciably differ in the types or magnitude of impacts they would cause.

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Prime and Unique Farmland

What if the project were not constructed?

There would be no freeway-related impact on farmland if the project were not constructed. Because of anticipated—and planned—continued urbanization of the Phoenix metropolitan area, it is likely that farmland in the Western Section of the Study Area would eventually be converted to urban uses.

What could the Arizona Department of Transportation (ADOT) do to reduce or avoid impacts?

The potential to avoid conversion of any prime and unique farmland attributable to impacts of any alternative or option is minimal. Prime and unique farmland, as defined by the FPPA, is extensive throughout the Study Area. Measures to reduce any impact would be evaluated where appropriate, and could include:

- provision for access to farmland otherwise made inaccessible by the project
- provision for protection, replacement or substitution of important farmland acreage

What could ADOT do to reduce construction impacts?

Agricultural practices adjacent to freeway construction could be affected by implementation of the proposed project. Impacts could include surface water runoff into irrigation canals and farm fields, impediments to the efficient movement of farm equipment, and construction-related emissions and dust on crops. ADOT could undertake several actions to minimize these types of impacts.

With respect to surface water-related impacts, Section 402 National Pollutant Discharge Elimination System (NPDES) of the Clean Water Act requires that ADOT, or its contractor, obtain a permit before beginning construction.

The permit requires that a Stormwater Pollution Prevention Plan (SWPPP) be prepared. The plan would include what are known as best management practices for controlling construction-related pollution discharge. Some measures that ADOT could use to reduce impacts in the floodplains during construction include:

- constructing silt barriers
- ensuring construction equipment is in good working order
- creating sediment basins
- using controlled equipment fueling and maintenance areas
- ensuring proper disposal of potentially contaminated materials
- limiting vegetation removal and soil disturbance
- seeding and mulching exposed slopes immediately after construction
- ensuring existing flows of existing canals and irrigation water

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Prime and Unique Farmland

With respect to air quality-related impacts, ADOT or its contractor would prepare and obtain an approved *Application for Earth Moving Permit, Demolition, and Dust Control Plan* in accordance with Maricopa County Rule 310, Fugitive Dust Ordinance, before beginning construction. The permit would describe measures to control and regulate air pollutant emissions during construction.

ADOT would implement a right-of-way acquisition program in accordance with appropriate state and federal laws. ADOT would coordinate with affected property owners as part of the acquisition process to provide access for farm equipment between divided agricultural parcels, or to purchase remaining farm parcels considered too small to farm either economically or functionally.

Are the conclusions presented in this summary final?

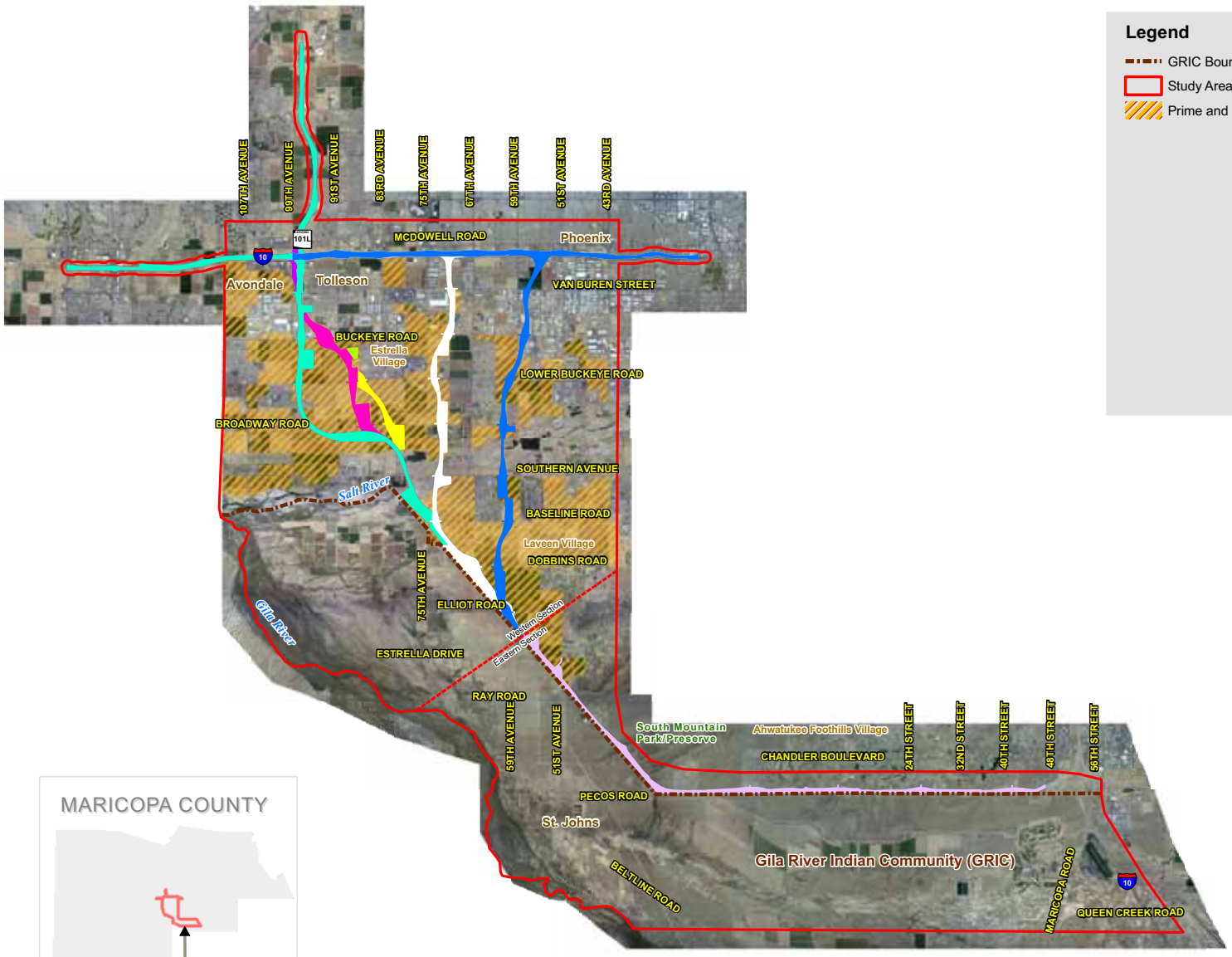
Quantitative findings relative to impacts could change. Potential changes would be based on outcomes related to the following issues and will be presented to the public as part of publication of the Draft EIS, Final EIS and, if an action alternative were selected, in the final design process. The issues include:

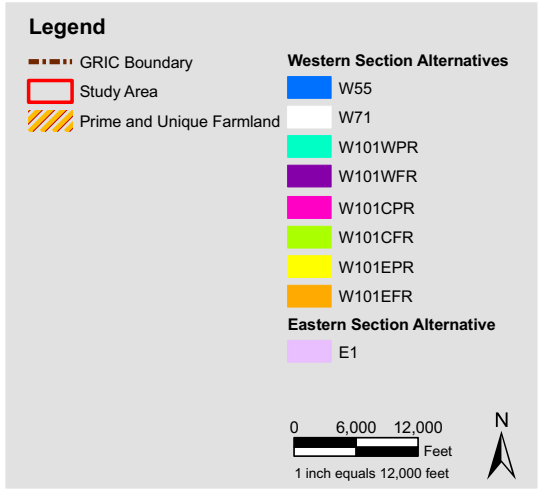
- refinement in design features through the design process
- updated aerial photography as it relates to rapid growth in the Western Section of the Study Area
- ongoing communications with the City of Phoenix regarding measures to minimize harm to Phoenix South Mountain Park/Preserve
- ongoing communications with the Gila River Indian Community (GRIC) regarding granting permission to study action alternatives on GRIC land
- ongoing consideration of public comments
- potential updates to traffic forecasts as regularly revised by the Maricopa Association of Governments
- potential changes regarding updated census data
- regularly updated cost estimates for construction, right-of-way acquisition, relocation and mitigation

Even with these factors possibly affecting findings, the study team anticipates effects would be equal among the alternatives and, consequently, impacts would be roughly comparable. This assumption would be confirmed if, and when, such changes were to occur.

As a member of the Citizens Advisory Team, how can you review the entire technical report?

The complete technical report is available for review by making an appointment with Mike Bruder at 602-712-6836 or Mark Hollowell at 602-712-6819.





South Mountain Transportation Corridor
TRACS No. 202L MA 054 H5764 01L
Federal Aid Number FHWA-AZ-EIS-202-D
E:...projects/AZ/ADOT/SouthMtn/TECH_REPORT0905/Farmland/farmland.mxd

Prime and Unique Farmland Report

Prime and Unique Farmland Within the Study Area

South Mountain Freeway Transportation Corridor Study

Aerial Photography Date: April 2006

Figure 2
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